

ABSTRACT

There is provided a focus control device including sensor means (101); error signal synthesizing means (102); arithmetic means (103) having an error input portion (104), a disturbance addition portion for adding a first disturbance value group to a focus error value group generated by the error input portion and producing an output, a phase compensation portion for performing at least a phase compensation calculation and an amplification calculation according to an amplification calculation gain on the output of the disturbance addition portion and generating a drive value group, a drive output portion (106) for generating a drive signal based on the drive value group, a response detection portion for detecting a detection complex amplitude value based on the focus error value group, a second disturbance value group, a second disturbance value group, and a third disturbance value group, and a gain modification portion for modifying the amplification calculation gain; driving means (108); and a focus actuator (109). The amplification calculation gain in the gain modification portion is modified based on the detection complex amplitude value, a predetermined complex amplitude value, and a correction complex value, and the phase of the correction complex value is substantially identical to the phase of the first disturbance value group.